



University of Michigan
C.S. Mott Children's Hospital

Mott Buckle Up!

Dianne DeGregorio

Child Passenger Safety Coordinator

Burden of Problem

- Leading cause of death
 - over 1/2 unrestrained
- 90% believe car seat is installed properly
 - 85% are incorrect



Annual Pediatric Patient Statistics

- Motor Vehicle Crashes:
 - 500+ patients seen ED (0-17yrs)
 - Represents 32% of all trauma admissions
 - only 5% of treated & released are MVC's
- Approximately 4,000 births

University of Michigan Vehicle Safety Programs

- Physical Medicine & Rehabilitation (*PM&R*)
- University of Michigan Program for Injury Research & Education (*UMPIRE*)
- University of Michigan Transportation Research Institute (*UMTRI*)
- Mott Buckle Up!

- Physical Medicine & Rehabilitation
 - 4 certified technicians
 - Evaluate children with temporary or chronic conditions that may prevent them from riding in a conventional seat
 - Wheelchair use in vehicles
 - In-patient: Modified EZ On Vests, Hippo car seats & car beds
 - Outpatient: larger special needs seats for children who have outgrown their conventional car seat



- U of M Program for Injury Research & Education
- Created in 1999
 - Facilitate exchange between automotive engineers & healthcare
- Current Projects
 - CIREN: Crash Injury Research & Engineering Network
 - Human Body Modeling
 - Automatic Collision Notification
 - Safety in a Box
 - Automotive Engineering Fellowship

- **Crash Injury Research & Engineering Network**
 - Goal = improve prevention, treatment & rehabilitation of MVC injuries ► reduce deaths, disabilities & human & economic costs
 - Funded, in part, by NHTSA
 - Multi-center research program (8 sites)
 - U of M is a founding center
 - Conducts in-depth studies of crashes, injuries & treatments to improve processes and outcomes

Safety In a Box

- Booster seat program
 - Measure weight & height
 - Worksheet with measurements
 - Take home “Licenses”
 - Toy vehicle with ramp to demonstrate belted vs. unbelted occupants
- Free program – available by request

- U of M Transportation Research Institute



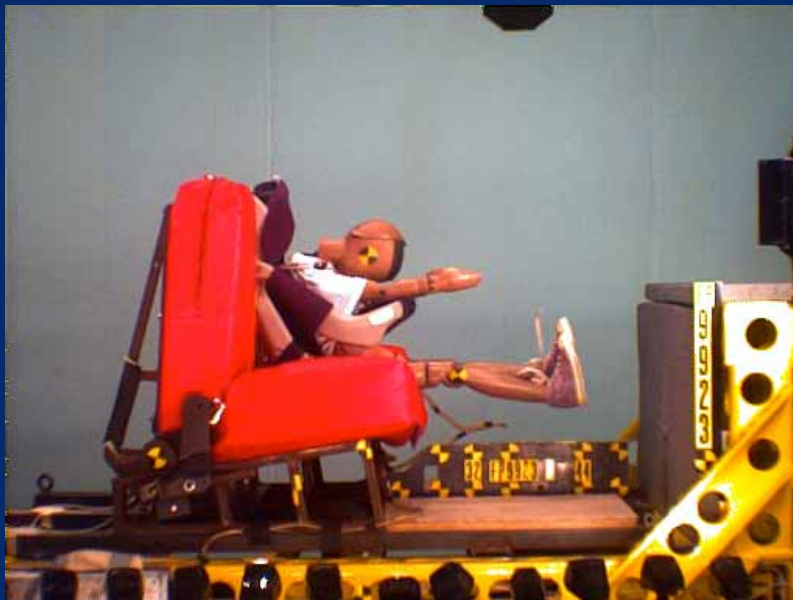
- Dummy development
- Child anthropometry studies
- Crash investigations





University of Michigan
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- Studies of child belt fit
- Surveys of misuse patterns & rates
- Research, design & testing of child restraints



Our Program

- U of M: C. S. Mott Children's Hospital
 - Pediatric Surgery/ Pediatric Trauma Program
 - Injury Prevention/ Mott Buckle Up!
- Lead organization for Safe Kids Washtenaw County
- OHSP Grant: October 2005 – September 2007

- **Car Seat Education**
 - Parent/ Family Education (In-patient)
 - Appointments (open to the community)
- **Coordination in Hospital**
 - NICU
 - Mom/ Baby
 - General Care
 - Physical Medicine & Rehabilitation
 - Med Equip
 - Social Work
- **Community Events**
 - Babies R Us
 - Pregnancy/ Parenting Groups
 - Auto Dealerships
 - Schools, Preschools & Day Cares
- **Angle Tolerance Testing**

Doing Our Part

- **1288 Seats Checked in 2007**
 - C.S. Mott Children's Hospital: 958
 - Community events: 330
- **215 Seats Provided in 2007**
 - C.S. Mott Children's Hospital: 136
 - Community events: 79
- **Training Technicians**
 - Over 40 new technicians trained
 - Includes: Auto Engineers, Insurance, CPS Advocates, Police Officers, Fire Fighters, and Healthcare Workers
- **Creating Fitting Stations**
 - 2008: 6 new fitting stations (so far)

Angle Tolerance Testing

- AAP recommends:
 - Every infant born < 37 weeks gestation
 - Undergo period of observation in car seat
- Monitor:
 - Heart Rate (Bradycardia)
 - Respiratory Rate (Apnea)
 - Oxygen Saturation Level (Desaturation)
- Revisions:
 - Current AAP from 2000
 - AAP update in 2008????
 - Mott update 2007: car bed use



Challenges

- Old habits are hard to break...
- Storage Space
- Setting Priorities
 - Money
 - Staffing
- Proactive vs. Reactive
 - Class vs. paging as being discharged
- Multi-lingual population

- Angle Tolerance Testing for ALL newborns meeting AAP criteria
- Increase parents educated before discharge
- “In & Around Cars Program” with Cub Scouts
- Expanding to include consultation within ED
- Train more Technicians
- Establish additional fitting stations
- Website – michigancarseats.com – coming soon!

Medicaid Reimbursement for Car Seats Is Cost-Effective Health Policy

- Study released 1/16/08 by Children's Hospital of Philadelphia
- Distributing car seats to low income children (Medicaid) could be as cost-effective as vaccination programs...
- Programs would break even after 3 years...
- Suggested: physician's prescription for:
 - Education
 - Convertible seat at birth
 - Booster seat at age 4



Contact Information

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Resource and Reference

- DVDs
 - 'Child Safety Seats' (Multi-lingual dvd): echominnesota.org
 - 'Don't Risk Your Child's Life' (dvd): Shelness Productions 336-774-0780
- Resource list: safekids.org/certification/resources.html
- Generic seat check forms: safekids.org/certification/docs/
- Car Seat Distributors:
 - Mercury Distributing (Hospital Supplier): mercurydistributing.com
 - Evenflo: 877-288-0288
 - National Safety Resources: nsrinc.org
- Conferences:
 - KIM: kidzinmotion.org
 - Life Savers: lifesaversconference.org
- Recall lists:
 - <http://www.hsrc.unc.edu/recalls>
 - <http://www-odi.nhtsa.dot.gov/cars/problems/recalls/childseat.cfm>